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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,099	03/10/2004	Achim-Philipp Sturm	004640-043	2355
21839 7590 02/05/2008 BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			EXAMINER HOFFMANN, JOHN M	
			ART UNIT 1791	PAPER NUMBER
			NOTIFICATION DATE 02/05/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<div style="border: 1px solid black; width: 150px; height: 20px; margin: 0 auto;"></div> <p style="text-align: center;"><b>Office Action Summary</b></p>	<b>Application No.</b> 10/796,099	<b>Applicant(s)</b> STURM ET AL.	
	<b>Examiner</b> John Hoffmann	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                               | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                      | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Specification*

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The terms "screw bridge" and "screw bottom" are not even mentioned in the specification.

As pointed out in **MPEP 608.01(o)**:

Note that examiners should ensure that the terms and phrases used in claims presented late in prosecution of the application (including claims amended via an examiner's amendment) find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description, see 37 CFR 1.75(d)(1). If the examiner determines that the claims presented late in prosecution do not comply with 37 CFR 1.75(d)(1), applicant will be required to make appropriate amendment to the description to provide clear support or antecedent basis for the terms appearing in the claims provided no new matter is introduced.

As indicated above, examiner could not find any antecedent basis for the language and any support appears to be very unclear. Thus it is deemed that a prima facie showing has been made of lack of clear support or antecedent basis. The burden is now on applicant to demonstrate clear support or antecedent basis for the claim language.

### *Drawings*

The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in

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the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

The drawings must show every feature of the invention specified in the claims (as per 37 CFR 1.83(a)). Therefore, the extruder, the smooth surface, the screw bridge, the screw bottom, the outer diameter, the inner diameter, the wedge surface, the free volume, the processing area, the core, the housing, the melt pump, and the dense combs must be shown or the feature(s) canceled from the claim(s).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

First it is noted that Examiner cannot tell what the invention is – and thus Examiner was not able to make a reasonably complete search of the prior art. For example, the terms "screw bridge" and "screw bottom" are indefinite as to what they mean. Examiner could find no mention of these things in the present specification nor in the prior art. One of ordinary skill would be at a complete loss as to what the claims do or do not cover.

Claim 1: it is unclear what the sense is the "same" as. It is unclear if the claim requires screw elements. There is confusing antecedent basis for "whose screws" – it

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is unclear if the claim requires more than one screw. It is not understood as to how an area can have a volume. Also it is unclear what the free volume is free of.

Claim 2 identifies the density as "per screw" – thus it is unclear whether it means each screw has this applied density. Or whether it means one divides the applied torque by the number of screws.

Claim 6 The use of "and/or" is indefinite as to what is required.

Claim 9: there is no antecedent basis for "the same sense".

Claim 13: it is unclear if a step of supplying an educt is required. The term "educt" is indefinite as to its meaning; Examiner cannot find the term in his dictionary.

Claim 14: there is no antecedent basis for "the...ratio". Note claim 14 uses "Am" but claim 9 uses "Az".

Claim 17 is not understood because it requires at least 4, but claim 1 seems to indicate there is either only 2 or only 3.

Claim 19-20: it is unclear whether the claim requires steps of controlling the temperatures. Also it is unclear what the control is separate from.

It is unclear if claim 27 requires a pre drying step.

Claim 23: there is no antecedent basis for "the total period"

Claim 22: is unclear if this claim requires a step of processing.

Claim 25: there is no antecedent basis for "its initial form".

Claim 28: there is confusing antecedent basis for "a polyconsolidate melt".

Compare to claim 33 which indicates there is inherently a melt, i.e. "the melt".

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Claim 34 states that the processing comprises a pump. It is unclear what is meant by a step comprising structure. Does it mean a step of using the pump?

There is confusing antecedent basis for the various processing. For example it is unclear if the "is processed" of claim 35 is a further processing step, or if it is the processing of claim 22.

The term "dense" is a term of degree (claim 36) which is indefinite as to how dense is "dense".

Claim 39: it is not understood what a "coronary" configuration. The term apparently relates to a crown or a heart - but it is unclear how either limits the claim.

Claim 34: there is no antecedent basis for "the processing out side of the extruder".

The above items are not to be taken as an exhaustive list. Many of the items are repeated throughout the claims, and thus makes those claim indefinite as well. The burden is on applicant to review all of the claims to ensure they are definite.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 4-9, 12-39 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the disclosed embodiments, does not reasonably provide enablement for the single means-type claim. The specification does

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not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and the invention commensurate in scope with these claims.

**FROM MPEP 2164.08(a) Single Means Claim**

A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

Presently, the claims are not a single means claim. However they are single step claims, by analogy to single means claims, they are not reasonably enabled. Claims 1 and 9 merely require "preparing" a product and an extruder, respectively. The claims do not require any other steps. At first look, some of the dependent claims, may look like they require additional steps - but the plain reading indicates otherwise. For example, claim 22 states "during processing, the polycondensate is applied". However looking back to claim 6, there is no step of processing – rather it merely refers to an intended use: "the polycondensate to be processed". This merely indicates an intention to process. There is no requirement of processing. Claim 1's preparing is not indicated as being requiring any processing step.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-25 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Nosker 5951940.

Claim 1: See col. 2, lines 10 and 64-67. As to the being fully-self cleaning. This term is not defined in the specification. Examiner finds it hard to believe that it can clean anything from itself – such as paint that was left on to dry for a few years. Rather Examiner interprets it to mean that it is capable of removing at least some small amount of dirt therefrom. For example, Nosker is capable of removing dirt that is in the material, via the extruding - what ever is fed in, will be fed out - be it PET or dirt.

As to “the same sense” it is noted that there are only two senses – clockwise and counterclockwise. Thus given 3 or more screws, at least two of them have an identical sense.

As to the processing area, lateral area, and free volume. It is inherent that there is a processing area/region because Nosker processes PET. It is inherent that there would be at least one surface and one volume, adjacent or near each other. The claim refers to ratios with 2 or three screws. But the claims do not limit those situations with more than 3 screws. Nosker clearly envisioned more than 3 screws. Thus any embodiment with more the 3 screws need not have any particular ratio: this applies to claims 4-5 and 12 and 14 as well.

Claims 2-3 and 10-11: the claims refers to a torque density in terms of an "axis distance". However there is no requirement as to what the axis is, or the distance from what. Since there is no limitation as to what the distance could or could not be, it is



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deemed that it could read on any distance at any time. It is deemed that one would reasonably expect that the axle/axle would be very close to other structure – for example a bearing which holds it in place. The distance maybe in terms of microns. Clearly such would make the fraction very large.

Claim 6 : see col. 3 lines 7. – it is clear it is contaminated with HDPE.

Claim 7-9, 37 and 14-15 and 17 are clearly met.

Claims 16 and 36: the combs are sufficiently dense enough to perform the Nosker process.

Claims 18 and 38: the temperature of nearly everything is controllable. For example one could apply an ice cube or a torch to anything to change its temperature.

Claims 19-20: since Nosker teaches melt-compounding it is deemed inherent that the temperature is controlled to permit it to be a melt.

Claims 21 and 39: it is presumed that any the configuration is like a crown – in that a crown can be in any configuration.

Claim 22 refers to “during processing” from claim 6 it is clear that no processing is claimed – rather it is in reference to an intended processing. It is deemed that the Nosker material is capable of undergoing substantially any processing. The claims do not require a step of processing, thus the prior art need not have the processing limitations. This applies to claims 23-24 also.

Claim 25: it is interpreted to relate to a prior form - including a form that occurs far before the preparing of claim 1. In other words, it is a product-by-process type limitation. This is met because it does not limit the present material. In other words, by

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looking at PET, there is no test which can tell whether it was ever at a particular density, for example 3 years prior. Thus a limitation that specifies a prior/initial state does not serve to define over the Nosker material – unless the claim clearly sets forth a step of using the initial material. This applies to claim 28 also

Claim 35: col. 4, lines 50-53.

Claim 13: states that an educt component supplied is an elastomer. Nosker does not disclose supply and educt component. Nor does the claim require a step of supplying. Examiner finds that the broadest reasonable interpretation is: if there is and educt component supplied, then it is an elastomer. However, since the conditional educt is not supplied in Nosker, there is no requirement that it be an elastomer.

Claims 1, 22-23, 33-34, 26 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Wagner 5895809.

Relevant portions are disclosed at col. 6, line 10 and col. 2, line 21 which discloses the degassing – the rest of the limitations are met for substantially the same reasons indicated above. Most notably, the claims have essentially only one step – the limitations that are somewhat like method steps are actually intended use type limitations.

Claim 33: See col. 2, lines 40-45.

Claim 34 is met because there is no processing out side of the extruder.

***Claim Rejections - 35 USC § 103***

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 23, 2, 3, 10 and 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nosker 5951940 alone or in view of Applicant's prior art admission

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Nosker discloses the invention as discussed above - but not the 30 second time limitation of claim 23. It would have been obvious to have the material melted for as short a time period as permitted. The faster the process, the quicker the process is conducted and the more material created.

In [0002] of the specification, applicant admits that it is known to keep the residence time short to minimize impairment. It would have been obvious to keep the material in the process for as short a time as possible.

Claims 2,3, 11 and 10 are also applied here, because applicant admits that it is known to use high torque densities to make the process proceed quickly. It would have been obvious to use as high a torque density as reasonably possible, so as to process the plastic as quickly as possible.

Claims 22-23, 29-32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner alone or in view of Applicant's prior art admission

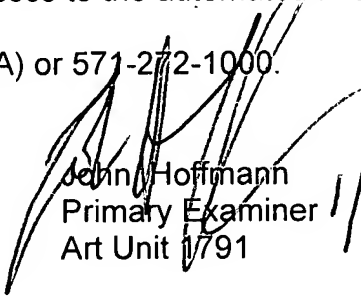
All of the limitations are treated substantially as above, except that the conclusion would be: It would have been obvious to process the plastic as quickly as possible for the known advantage that applicant admits as being known.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
John Hoffmann  
Primary Examiner  
Art Unit 1791

1/30/01

jmh